

CLAIMS

1. A light source apparatus characterized in that said light source includes a rod-like member in which light can be passed through the inside thereof, one end thereof being formed as a light exit portion, other surface than said one end being formed as a light reflecting surface, a plurality of light-emitting diodes being disposed on said rod-like member at its longitudinal direction side surface of said reflecting surface along said longitudinal direction.

2. A light source apparatus according to claim 1, characterized in that said light-emitting diodes are disposed at substantially an equal interval.

3. A light source apparatus according to claim 2, characterized in that a distance between a light-emitting diode nearest the end face of said rod-like member in the opposite side of said light exit portion of said light-emitting diode and said end face is substantially a half of the interval between said adjacent light-emitting diodes.

4. A light source apparatus according to claim 1, characterized in that said light-emitting diode is a red light light-emitting diode.

5. A light source apparatus according to claim 1, characterized in that said light-emitting diode is a white light light-emitting diode.

6. A light source apparatus according to claim 1, characterized in that said rod-like member is extended in such a manner that said one end serving as said light exit portion is curved.

7. A light source apparatus according to claim 1, characterized in that said rod-like member is hollow, the inside of the surface other than said one end being formed as a light reflection surface.

8. A light source apparatus according to claim 1, characterized in that said rod-like member is a solid transparent member, said rod-like member having a recess formed on its longitudinal direction side surface to dispose said light-emitting diode therein, other portion than said recess in other surface than said one end being formed as a light reflecting surface.

9. In a projection type display apparatus in which light from a light source is irradiated on a light modulator device, light modulated by said light modulator device in response to a

video signal being projected from a projection lens, a projection type display apparatus characterized in that said light source includes a rod-like member in which light can be passed through the inside thereof, one end thereof being formed as a light exit portion, other surface than said one end being formed as a light reflecting surface, a plurality of light-emitting diodes being disposed on said rod-like member at its longitudinal direction side surface of said reflecting surface along said longitudinal direction.

10. A projection type display apparatus according to claim 9, characterized in that said light-emitting diodes are disposed at substantially an equal interval.

11. A projection type display apparatus according to claim 10, characterized in that a distance between a light-emitting diode nearest the end face of said rod-like member in the opposite side of said light exit portion of said light-emitting diode and said end face is substantially a half of the interval between said adjacent light-emitting diodes.

12. A projection type display apparatus according to claim 9, characterized in that said light-emitting diode is a white light light-emitting diode.

13. A projection type display apparatus according to claim 9, characterized in that said light source is composed of a red light source containing only a red component, a green light source containing only a green component and a blue light source containing only a blue component.

14. A projection type display apparatus according to claim 9, characterized in that said projection type display apparatus includes a reflector for reflecting light emitted from said light source to provide parallel light, said rod-like member being extended in such a manner that said one end serving as said light exit portion being curved and said light exit portion being disposed so as to oppose said reflector.

15. A projection type display apparatus according to claim 9, characterized in that said rod-like member is hollow, the inside of the surface other than said one end being formed as a light reflecting surface.

16. A projection type display apparatus according to claim 9, characterized in that said rod-like member is a solid transparent member, said rod-like member having a recess formed on its longitudinal direction side surface to dispose said light-emitting diode therein, other portion than said recess in other surface than said one end being formed as a light

reflecting surface.

17. In a projection type display apparatus in which light from a light source is irradiated on a light modulator device, light modulated by said light modulator device in response to a video signal being projected from a projection lens, a projection type display apparatus characterized in that said light source is composed of a first light source and a second light source having an emission spectrum different from that of said first light source, said light source includes a replacement optical system for replacing light of a specific wavelength band of light beams from said first light source with light beams from said second light source, said second light source includes a rod-like member in which light can be passed through the inside thereof, one end thereof being formed as a light exit portion, other surface than said one end being formed as a light reflecting surface, a plurality of light-emitting diodes being disposed on said rod-like member at its longitudinal direction side surface of said reflecting surface along said longitudinal direction.

18. A projection type display apparatus according to claim 17, characterized in that said light-emitting diodes are disposed at substantially an equal interval.

19. A projection type display apparatus according to claim 18, characterized in that a distance between a light-emitting diode nearest the end face of said rod-like member in the opposite side of said light exit portion of said light-emitting diode and said end face is substantially a half of the interval between said adjacent light-emitting diodes.

20. A projection type display apparatus according to claim 17, characterized in that said second light source is composed of a red light light-emitting diode.